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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 10/050,716  | 01/18/2002  | Gregg D. Sucha       | A8287                      | 6834             |
| 7590<br>SUGHRUE MION, PLLC<br>2100 Pennsylvania Avenue, NW<br>Washington, DC 20037-3213 |             |                      | EXAMINER<br>NGUYEN, DUNG T |                  |
|   |             |                      | ART UNIT<br>2828           | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE  | MAIL DATE   | DELIVERY MODE        |                            |                  |
| 3 MONTHS  | 03/12/2007  | PAPER                |                            |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                          |                     |  |
|------------------------------|--------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b>   | <b>Applicant(s)</b> |  |
|                              | 10/050,716               | SUCHA ET AL.        |  |
|                              | <b>Examiner</b>          | <b>Art Unit</b>     |  |
|                              | Dung (Michael) T. Nguyen | 2828                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 December 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 30-34,36,54,55 and 57-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 30-32,54,57-59 is/are rejected.
- 7) Claim(s) 33,34,36 and 55 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## OFFICE ACTION

### *Response to Arguments*

Applicant's arguments with respect to claims 30-34, 36, 54-55, and 57-59 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30, 54, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Digiovanni et al. (5237576) in view of Swaminathan et al. (5717712).

Digiovanni et al. show in Fig. 1 and 4-5 a short-pulse fiber laser 30 (col.4, 1.63-65) but fail to disclose a method of stabilizing the short-pulse fiber laser, comprising: isolating said fiber laser in a temperature-controlled enclosure from an external environment; and operating the fiber laser within the enclosure while utilizing the enclosure to stabilize a repetition rate of the fiber laser.

Swaminathan et al. teach a temperature-controlled enclosure from an external environment for a fiber optic communication laser (abstract)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Digiovanni et al. what is taught by Swaminathan et al. in order to maintain the repetition rate (desired performance) (col.2, 1.3-18) of the fiber laser.

Claims 31-32, and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiGiovanni et al. (5237576) in view of Swaminathan et al. (5717712) and further in view of Takara et al. (5646774).

With respect to claim 31, DiGiovanni et al. and Swaminathan et al. disclose all limitations of the claims except for the fiber laser being wrapped onto a fiber spool.

Takara et al. teach the fiber laser is wrapped onto a fiber spool 23 in Fig.5A. it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide DiGiovanni et al. and Swaminathan et al. what is taught by Takara et al. in order to change the optical path length of the fiber laser.

With respect to claim 32, it is understood that the thermal expansion of the fiber spool must be matched to the optical fiber. Otherwise, the optical fiber laser would not operate properly.

With respect to claim 58, Takara et al. disclose in Fig.5A and col.8, 1.7-15 a piezoelectric transducer and a power supply 35 and col.8, 1.32-35 disclose the rep. rate is controlled.

With respect to claim 59, Takara et al. disclose in Fig.1 and col.4, 1.44-55 a phase lock loop circuit.

***Allowable Subject Matter***

Claims 33-34, 36 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Communication Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Michael Dung Nguyen

2/20/07